

1. An orthotic strut component for an orthosis, comprising the combination of a ductile metallic tube having a cross-section of elongate shape and an internal core of substantially uncured plastics and fibre composite material which is a close fit within the tube, wherein the tube is at least 300mm in length and has an internal cross-sectional area which is no more than Kc^2 , where c is the internal circumference of the tube and K is a number less than or equal to 0.1.

10 2. An orthotic strut component according to claim 1, wherein the tube is made of annealed aluminium alloy and has a wall thickness in the range of from 0.5mm to 2.0mm.

15 3. An orthotic strut component according to claim 1, wherein the cross-section of the tube is of an oblong shape having substantially straight sides and rounded ends, the ratio of the cross-section length to its width being in the range of from 2.5 to 4.0.

20 4. An orthotic strut component according to claim 1, wherein the cross-section of the strut is substantially constant over the major part of the length of the strut component, and the thickness of the strut over the major part is in the range of from 4mm to 12mm.

25 5. An orthotic strut component according to claim 1, wherein the cross-section of the tube is constant over the major part of its length and is of an oblong shape having straight parallel sides and rounded ends, the cross-section length being in the range of from 15mm to 40mm.

30 6. An orthotic strut component according to claim 1, wherein the value of K is in the range of from 0.04 to 0.10.

7. An orthotic strut component according to claim 1, wherein the internal core comprises an inner kernel made of a heat-activated expansion agent extending

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lengthwise through the strut surrounded by the said plastics and fibre composite material.

8. An orthotic strut component according to claim 7, wherein the expansion agent 5 is a foaming agent which is formed as one or more longitudinally extending strings of material such as an epoxy resin.

9. An orthosis comprising at least one strut component as claimed in claim 1, the core having been cured. 10

10. A method of making an orthotic strut component for an orthosis, comprising providing a tube which is of circular cross-section and is at least 300mm in length, which is made of a ductile metallic material and which has an internal circumference c , providing an elongate tow of substantially uncured plastics and fibre composite 15 material having a material cross-sectional area of no more than Kc^2 , where K is a number less than or equal to 0.10, inserting the composite tow into the tube, and deforming the tube so that it has a deformed cross-section of elongate shape with an internal cross-sectional area substantially equal to that of the tow.

20 11. A method according to claim 10, wherein the deforming step comprises laterally compressing the tube to produce a deformed cross-section which is of oblong shape, and has substantially straight parallel sides and rounded ends, the strut thickness after deformation being in the range of from 4mm to 12mm over at least the major part of its length. 25

12. A method according to claim 10, wherein the tow comprises at least one rolled-up sheet of pre-impregnated fibre and plastics composite material, the fibres of the sheet being substantially unidirectional and running substantially parallel to the axis of rolling.

30 13. A method according to claim 10, wherein the tow includes an inner elongate string of heat-activated expansion agent.

14. A method of making an orthosis, comprising the method of claim 10, bending the strut to suit the patient's body part to be supported, and heating the strut to cure the plastics and fibre composite.